

Association for Information Systems

**AIS Electronic Library (AISeL)**

---

ICEB 2013 Proceedings

International Conference on Electronic Business  
(ICEB)

---

Winter 12-1-2013

## **How To Persuade Non-Mobile Shoppers Into Mobile Shoppers: A Trust Enhancing Perspective**

Chiang Yu Cheng

Yu Cheng Tu

Che Yen Huang

Follow this and additional works at: <https://aisel.aisnet.org/iceb2013>

---

This material is brought to you by the International Conference on Electronic Business (ICEB) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICEB 2013 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# HOW TO PERSUADE NON-MOBILE SHOPPERS INTO MOBILE SHOPPERS: A TRUST ENHANCING PERSPECTIVE

Chiang Yu Cheng, Chaoyang University of Technology, Taiwan, ccy@cyut.edu.tw  
 Yu Cheng Tu, Chaoyang University of Technology, Taiwan, tuyc@cyut.edu.tw  
 Che Yen Huang, National Central University, Taiwan, yanaynwade@gmail.com

## ABSTRACT

Mobile shopping is getting popular and pervasive. However, the number of mobile users is not parallel to the number of mobile shoppers, because consumers frequently concern about security while conducting mobile transactions. The current study aims to elaborate in what trust enhancing message designs can be used to persuade non-mobile shoppers into mobile shoppers. Drawing on social judgment theory and the model of persuasion, our study has the potential revealing that consumers' negative attitudes toward ubiquitously using credit cards over the air can be improved by persuasive messages if they are added into the checkout page of a shopping website.

**Keywords:** mobile shopping, non-mobile shopper, mobile shopper, social judgment theory, the model of persuasion

## INTRODUCTION

Mobile internet access is getting more and more pervasive around the world. According to the survey conducted by Meeker and Wu [12], there are more than 1.5 billion mobile users worldwide up from 1.1 billion a year before with 30 percent growth and these users so far contribute to mobile traffic about 15% of all Internet traffic which is predicted to surpass that of Internet access using a traditional desktop PC by the end of 2015. Despite the number of mobile users expands rapidly, a survey of 2,166 US adults found that 72% of mobile users concerned more about privacy on their mobile devices than they were one year ago [20]. Another survey conducted by Econsultancy [5] also reported that 39% of 1,000 UK consumers concerned about security on their smartphones as one of the main barriers to mobile commerce. More specifically, a total of 1,406 online consumers failed to complete a mobile transaction due to obstacles encountered during checkout, while 51% of them stated that entering credit card information at checkout is one of obstacles that they feel uncomfortable to do so [7].

Obviously, all above findings have revealed the importance of trust assurance and uncertainty mitigation during the checkout stage of mobile shopping. This is consistent with the proposition of Chase and Dasu [2] that service encounters should end satisfactorily and that negative experiences should be overcome as soon as possible, because events (e.g., expressions of security concerns) that occur near the end of an encounter (e.g., checkout stage) have a more profound impact than earlier events on the overall shopping experience. Previous studies however pay very scant research effort on how to persuade consumers with security concerns that the websites they conduct mobile credit card shopping are safe. The current study takes a step further ascertaining in what situations non-mobile shoppers can be persuaded into mobile shoppers. The concept of trust transfer [18] serves as theoretical underpinning to address how a thruster's trust in one subject can be transferred to another subject, while social judgment theory [14] and the model of persuasion [4] are applied to clarify consumers' attitude changes after receiving persuasive messages. We postulate that consumers' trust in traditional online shopping is transferable to mobile shopping if trust enhancing messages presented on the checkout page of desktop shopping can be stretched out to that of ubiquitous shopping. Our expected findings contribute to the relevant literature by discovering theoretical phenomena and offering managerial implications that help both researchers and practitioners to understand how to persuade non-mobile shoppers into mobile shoppers. In other words, the findings are beneficial to the ones who are striving to build consumer trust in mobile shopping.

## THEORETICAL FOUNDATION

### Trust Transfer

Trust transfer refers to a cognitive delivery process that an individual's trust is able to be transferred from a known entity to an unknown entity [18]. Previous studies have confirmed that trust transfer frequently occurs within or between trusting channels. For example, Perks and Halliday [13] identified that consumers who trust a product of the brand bought in one store will trust a new product of that brand sold in another store. Similarly, Stewart [19] found that trust is transferrable from a trusted e-commerce website to an unfamiliar one if they are affiliated by hyperlinks. In these two cases, trust is transferred within the same channel (e.g., offline/offline or online/online). On the other hands, trust can also be transferred between different channels. For example, Lee et al. [8] documented that trust can be transferred from offline banking to online banking or from online retailing to offline retailing. Although these studies shed light on trust transfer within or between trusting channels, there is a lack of research validating whether consumers' trust in traditional online shopping can be transferred to mobile shopping with the exceptions of Lin et al. [9] and Lu et al. [10]. The concept of trust transfer in mobile shopping is considered to be relatively new and is expected to have the potential alleviating consumers' security concerns about mobile transactions because

is transferrable from one familiar party to an unfamiliar party as mentioned earlier [18].

### **Social Judgment Theory**

Social judgment theory defines attitude change as the stands the individual upholds and cherishes about objects, issues, persons, groups, or institutions [14]. The essence of the theory is that the degree of attitude change caused by receiving information depends on how the recipient evaluates that information. Attitude change can be a two-step process. First, individuals who hold a position on an issue indicate this position by marking an anchor point on an attitude continuum ranging from acceptance to no commitment to rejection. Where the mark is placed dictates the relative likelihood of assimilation and contrast. One of these two effects occurs when a discrepant viewpoint is expressed in the receiving information. The closer the information is to the anchor point, the more likely it is to be assimilated; the more distant it is, the more likely it is to be contrasted. Thus, the second step involves the information recipient mentally measuring the distance between the anchor point and where the information falls on the continuum. If the message is dissuasive and the recipient's anchor point (ex-ante attitude) represents acceptance of the message, assimilation occurs. If the message is persuasive but the recipient's anchor point is in the rejection region, contrast occurs. Thus, if the distance between the two points is too little or too much, attitude change is unlikely. On the other hand, attitude change is likely if the recipient's anchor point is placed in the no-commitment region and the message is in either the acceptance or rejection region, or if the message falls in the no-commitment region and the recipient's ex-ante attitude is in the region of acceptance or rejection. Although social judgment theory is useful for understanding attitude change, its focus is exclusively on evaluating the distance between the individual's anchor point and the location of the message; it is not on the message's content per se [16]. Thus, we apply Cialdini's model of persuasion to guide the design of message content.

### **The Model of Persuasion**

There are seven principles that persuaders can use to improve the persuasiveness of their messages [4], including reciprocity, commitment, liking, social proof, authority, contrast, and scarcity. Although reciprocity, commitment, liking, and social proof have been shown to be valid [3], we were interested in the source and proximity of the message, which are addressed by the last three of Cialdini's principles. The principle of authority is the extent to which a persuader has a certain level of prestige, reputation, or expertise. Recipients generally believe that accepting information from a persuader with recognized authority decreases the probability of making a wrong decision. The authority principle can be represented by trustmarks that reflect the prestige, reputation, or expertise of the shopping website [15]. Contrast refers to information that can be used to distinguish the pros and cons of whatever is being compared. For example, if people first lift a heavy stone and then a light stone, they will feel the second stone to be lighter than they would had they not lifted the heavy stone first. Thus, applying the contrast principle in trust enhancing messages is expected to inform mobile shoppers that the website has better security than competing sites. It should be noted that contrast here is different from contrast in social judgment theory. For Cialdini, scarcity refers to objects of persuasion that are both valuable and rare. It has been shown that objects and opportunities become more valuable as they become less available [11]. The scarcity principle explains why trust-promoting protection mechanisms are safe: they are seldom descrambled by hackers.

## **RESEARCH MODEL AND HYPOTHESES**

Based on the integration of Cialdini's principles with social judgment theory, we used three types of persuasive messages operationally defined as the psychological distance between the message content and the consumer's ex-ante attitude, they are authority only, authority+contrast, and authority+contrast+scarcity. In addition, it is hypothesized that consumers' ex-post attitudes are affected by their ex-ante attitudes and the relationship between these sequential attitudes are moderated by the levels of message persuasiveness. Figure 1 illustrates our research model and hypotheses.

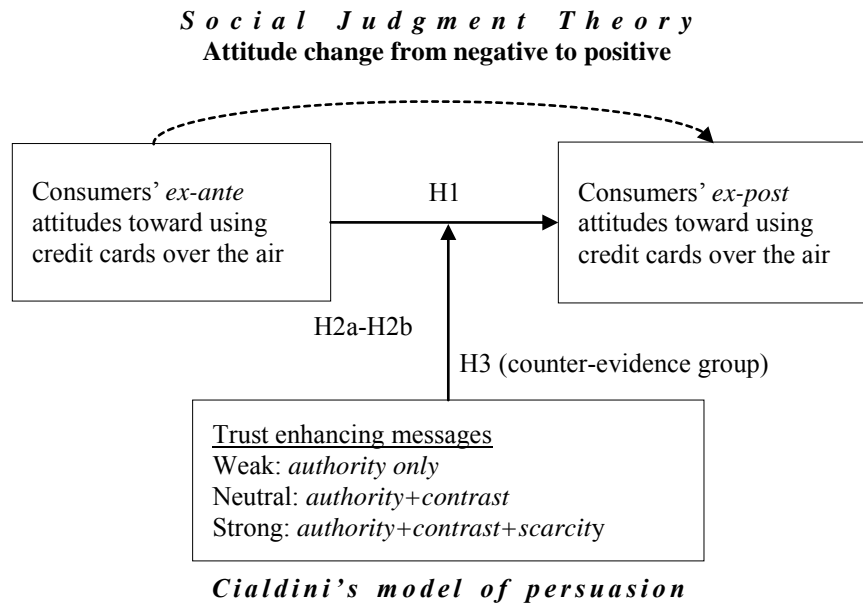


Figure 1. Research model

In evaluating consumers' attitudes about a service, Bolton and Drew [1] commented that a customer's attitude about a service offering at time  $t$  depends on her or his prior attitude at time  $t-1$ . This is because that prior experience with a service provider serves as an anchor for subsequent attitudinal evaluation [6]. When consumers perceive that the actual performance of the receiving service outperforms their expectations about that service, it is likely to result in attitude improvement (from negative to positive) as well as attitude strengthening (from positive to positive). In the context of mobile shopping, we postulate that consumers with negative attitudes about using credit cards over the air are affected by their ex-ante negative attitudes toward the same behavior, because they are the ones who obstinately conceive such a transaction as a dangerous adventure. We therefore proposed the following hypothesis:

**H1.** Consumers' ex-ante attitudes toward using credit cards over the air significantly affect their ex-post attitudes toward using credit cards over the air.

In our contention, the authority message itself is the weakest persuasive message because it conveys only a pictorial logo to consumers (i.e., trustmark). The authority+contrast message however presents not only a trustmark logo on the checkout page, but also conveys a comparable message to inform consumers that the website has better security than other websites they might visit. As for the authority+contrast+scarcity message, it is considered to be the strongest persuasive message in that it presents not only a trustmark logo and a comparable message, but also provides additional trust-enhancing message that informs consumers that the website is definitely safe because hackers will take a trillion years to decode the credit card information. Urbany et al. [21] have demonstrated that the more information consumers receive before their transactions, the less uncertainty of those transactions they perceive. In our research context, we argue that the stronger the trust enhancing message is, the more likely consumers' negative toward using credit cards over the air will be alleviated. We therefore propose the following hypotheses:

**H2a.** Trust enhancing messages that are encapsulated by authority, contrast, and scarcity create more attitude improvement than trust enhancing messages encapsulated by authority and contrast alone.

**H2b.** Trust enhancing messages that are encapsulated by authority and scarcity create more attitude improvement than trust enhancing messages encapsulated by authority alone.

For consumers originally possess positive credit card usage attitude, a stronger trust enhancing message may lead their attitudes to become more positively strengthened that a weaker message does, because a stronger message help those positive attitude consumers confirm that their decision to use credit card over the air is correct, while a weaker message may not be able to produce such an attitude reinforcement. We therefore propose the following hypothesis:

**H3.** Trust enhancing messages that are encapsulated by authority, contrast, and scarcity produces higher attitude strengthening for consumers with positive attitude toward using credit cards over the air.

## EXPECTED CONTRIBUTIONS

### Theoretical Contributions

Previous studies have evaluated the likelihood of trust transfer using mobile shoppers as research subjects (e.g., [9] [10]), the current study however uses non-mobile shoppers to be our research target. It is reasonable to believe that trust enhancing messages needed by non-mobile shoppers should not be parallel to the ones needed by mobile shoppers. Deriving mobile shopping behavior from experienced consumers does not necessarily guarantee that inexperienced consumers will perform the similar behavior because they project attitudes on two extremes of the continuum, ranging from favorable to mobile shopping to very unfavorable to mobile shopping. Thus, our expected findings are closer to the fact and are more able to practically address the phenomenon why consumers get involve in online shopping but not in mobile shopping. Furthermore, unlike prior studies mainly focus on the relationship between trust in online shopping and trust in mobile shopping, our expected findings contribute to mobile shopping context elaborating what persuasive messages can be applied to achieve trust transfer across channels. More specifically, the present study applies social judgment theory to monitor in what situations consumers with negative attitudes toward using credit cards over the air can be persuaded into the ones who are willingly using the same tool to transact ubiquitously.

### Practical Implications

Practically, our expected findings have the potential to reveal that consumers' negative attitudes toward ubiquitously using credit cards over the air can be affected by the persuasive messages they receive. In other words, providing them with additional messages that address their security concerns can facilitate attitude change, because trust enhancing messages gives consumers the opportunity to reassess their ex-ante negative attitudes toward incoming persuasive messages, creating the potential for attitude change. In addition, the levels of message persuasiveness also provide the way in which practitioners can use to bring out attitude change. For authority only message, it may give consumers no reason to accept the persuasive message, and thus it produces very little attitude change. This premise seems straightforward, but the trustmarks used by most mobile websites contain on or only authority information. We expect that consumers with negative attitudes may want to receive strengthening enough messages, because consumers generally feel that a trustmark is just a symbol, and they lack any specific understanding of its meaning [22]. Logically, the more deficient the explanatory capacity of a message, the less persuasive it is [17]. Although the manipulation of authority+contrast+scarcity is expected to be the most persuasive combination, consumers with positive attitudes of credit card usage over the air should also be taken into account, because they contribute more to market share than their counterparts do even though such a combination is expected to produce attitude strengthening to them rather than attitude change. In sum, our expected findings help shopping websites reevaluate their trust assurance and improve it by adding persuasive elements.

## REFERENCES

- [1] Bolton, R.N. & Drew, J.H. (1991) 'A longitudinal analysis of the impact of service changes on customer attitudes', *Journal of Marketing*, Vol. 55, No. 1, pp. 1-9.
- [2] Chase, R.B., & Dasu, S. (2001) 'Want to perfect your company's service? Use behavioral science', *Harvard Business Review*, Vol. 79, No. 6, pp. 78-84.
- [3] Cheung, M.Y., Luo, C., Sia, C.L., & Chen, H. (2009) 'Credibility of electronic word-of-mouth: Informational and normative determinants of online consumer recommendations', *International Journal of Electronic Commerce*, Vol. 13, No. 4, pp. 9-38.
- [4] Cialdini, R.B. (1993) *Influence: The Psychology of Persuasion*. Morrow, New York, NY.
- [5] Econsultancy (2013). 'Screen size and security concerns among main barriers to mobile commerce', available at <http://econsultancy.com/tw/blog/62917-screen-size-and-security-concerns-among-main-barriers-to-mobile-commerce-report?sf14533642=1> (accessed 29 July 2013).
- [6] Helson, H. (1964) *Adaptation-Level Theory*. New York: Harper & Row Publishers, Inc.
- [7] Jumio (2013) 'Retailers, Listen Up: High Rates of Mobile Shopping Cart Abandonment Tied to Poor User Experience', available at <http://www.jumio.com/2013/05/retailers-listen-up-high-rates-of-mobile-shopping-cart-abandonment-tied-to-poor-user-experience-pr/> (accessed 29 July 2013).
- [8] Lee, K.C., Kang, I., & McKnight, D.H. (2007) 'Transfer from offline trust to key online perceptions: an empirical study', *IEEE Transactions on Engineering Management*, Vol. 54, No. 4, pp. 729-741.
- [9] Lin, J., Lu, Y., Wang, B., & Wei, K.K. (2011) 'The role of inter-channel trust transfer in establishing mobile commerce trust', *Electronic Commerce Research and Applications*, Vol. 10, No. 6, pp. 615-625.
- [10] Lu, Y., Yang, S., Chau, P.Y.K., & Cao, Y. (2011) 'Dynamics between the trust transfer process and intention to use mobile payment services: A cross-environment perspective', *Information & Management*, Vol. 48, No. 8, pp. 393-403.
- [11] Mazis, M.B., Ahtola, O.T., & Klippel, R.E.A (1975) 'A comparison of four multi-attribute models in the prediction of consumer attitudes', *The Journal of Consumer Research*, Vol. 2, No. 1, pp. 38-52.
- [12] Meeker, M. & Wu, L. (2013) 'Kleiner Perkins Caufield Byers (KPCB): Internet Trend in 2013', available at <http://www.kpcb.com/insights/2013-internet-trends> (accessed 29 July 2013).
- [13] Perks, H. & Halliday, S.V. (2003) 'Sources, signs and signaling for fast trust creation in organizational relationships', *European Management Journal*, Vol. 21, No. 3, pp. 338-350.
- [14] Sherif, M. & Hovland, C.I. (1980) *Social Judgment: Assimilation and Contrast Effects in Communication and Attitude*

*Change*. Yale University Press, New Haven, CT.

- [15] Shu, W. & Cheng, C.Y. (2012) 'How to improve consumer attitudes toward using credit cards online: An experimental study', *Electronic Commerce Research and Applications*, Vol. 11, No. 4, pp. 335-345.
- [16] Siero, F.W. & Doosje, B.J. (1993) 'Attitude change following persuasive communication: integrating social judgment theory and the elaboration likelihood model', *European Journal of Social Psychology*, Vol. 23, No. 5, pp. 541-554.
- [17] Smith, G.F., Benson, P.G., & Curley, S.P. (1991) 'Belief, knowledge, and uncertainty: a cognitive perspective on subjective probability', *Organizational Behavior and Human Decision Processes*, Vol. 48, No. 2, pp. 291-321.
- [18] Stewart, K.J. (2003) 'Trust transfer on the World Wide Web', *Organization Science*, Vol. 14, No. 1, pp. 5-17.
- [19] Stewart, K.J. (2006) 'How hypertext links influence consumer perceptions to build and degrade trust online', *Journal of Management Information Systems*, Vol. 23, No. 1, pp. 183-210.
- [20] TRUSTe (2013) 'TRUSTe Privacy Index 2013 Edition', available at <http://www.truste.com/window.php?url=http://download.truste.com/TVarsTf=5SK2FAW4-359> (accessed 29 July 2013).
- [21] Urbany, J.E., Dickson, P.R., & Wilkie, W.L. (1989) 'Buyer uncertainty and information search', *Journal of Consumer Research*, Vol. 16, No. 2, pp. 208-215.
- [22] Williams, R. and Grimes, A. (2010) 'Involvement and the influence of online third-party endorsements', *International Journal of Internet Marketing and Advertising*, Vol. 6, No. 1, pp. 65-84.